

## **State of Maine Learning Results GUIDING PRINCIPLES**

*Each Maine student must leave school as—*

- 1  
A CLEAR & EFFECTIVE COMMUNICATOR
- 2  
A SELF-DIRECTED & LIFELONG LEARNER
- 3  
A CREATIVE & PRACTICAL PROBLEM-SOLVER
- 4  
A RESPONSIBLE & INVOLVED CITIZEN
- 5  
A COLLABORATIVE & QUALITY WORKER
- 6  
AN INTEGRATIVE & INFORMED THINKER



Form X ♦♦♦♦♦ *Appendixes for—*

**Personal Learning Plan—  
Career Preparation for High School  
Students** (Forms A & B)

**Career Preparation  
for Grades 3-4** (Form C)

**Career Preparation  
for Middle School Students** (Form D)

**Maine Learning Results  
Curriculum Integration Project**  
Maine Association of Vocational Education  
Administrators (MAVEA)

*Project Director* – Tim Hathorne, Director  
Mid-Coast School of Technology

*Facilitator* – Dorry French, Project Coordinator  
Center for Career Development

*The original document in this Career Preparation series was produced for secondary students in Autumn 1998 for career preparation pilots at—*

Camden-Rockport High School/SAD 28  
Christine Garrison, EdD, Principal

Medomak Valley High School/SAD 40  
Madelyn Litz, School-to-Career Coordinator

Mid-Coast School of Technology  
Tim Hathorne, Director

Rockland District High School  
Rita Hurtt, School-to-Career Coordinator



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**The Curriculum Integration Project** is an initiative of the Maine Association of Vocational Education Administrators (MAVEA). A primary goal of this initiative is to demonstrate the important role of secondary technical education for the future success of our high school graduates by linking technical and career preparation curricula to the State of Maine Learning Results.

*Project Director*

Tim Hathorne, Director  
Mid-Coast School of Technology

*Project Facilitator*

Dorry French, Project Coordinator  
Center for Career Development

**This document presents the Appendixes common to *Personal Learning Plan—Career Preparation for High School Students* ([Forms A & B](#)), *Career Preparation for Grades 3-4* ([Form C](#)) and *Career Preparation for Middle School Students* ([Form D](#)). Together, these documents represent MAVEA's Maine Learning Results Curriculum Integration Project for Career Preparation.**



*Curriculum Integration Project documents are intended for use by Maine public schools. Other individuals or organizations wishing to use them should consult Tim Hathorne, MAVEA Project Director, Mid-Coast School of Technology, 1 Main Street, Rockland, Maine 04841, or the Research & Curriculum Division of the Center for Career Development, Southern Maine Technical College, 2 Fort Road, South Portland, Maine 04106.*

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### ***Note to Faculty & Students***

**APPENDIXES** are the same for all of the Career Preparation documents in this series.

***Core of Learning: An Investment in Maine's Future.*** Augusta, ME: Maine Department of Education, 1990. A determination by a statewide group of educators, staff of the Maine Department of Education, state legislators, and businesspeople of the knowledge, skills, and attitudes that all Maine students should have by high school graduation.

**\*Cunanan, Esmeralda S., and Maddy-Bernstein, Carolyn. *Exemplary Career Guidance Programs 1995: Secondary and Postsecondary.***

Berkeley, CA: National Center for Research in Vocational Education, 1997. Profiles of nine innovative, comprehensive, and successful career guidance programs around the country that pull together schools, students, parents, and businesses.

**Garr, J. Michael, ed. *The Complete Guide for Occupational Exploration: An Easy-to-Use Guide to Exploring Over 12,000 Job Titles Based on Interests, Experience, Skills, and Other Factors.*** Indianapolis, IN: JIST Works, 1993. Includes activities for career assessment and planning.

**\*Maine Commission on Secondary Education. *Promising Futures: A Call to Improve Learning for Maine's Secondary Students.*** Augusta, ME: MDOE, 1998. A report to the Commissioner of Education on the state of Maine's high schools and the performance of Maine's high school students. Lists core principles for school renewal; teaching and scheduling practices that should be phased out; and recommendations, observations, and challenges for school improvement, including the implementation of a Personal Learning Plan for every student.

**Maine Department of Labor. *Employment and Job Openings in Maine, by Occupation: 1994 to 2005.*** Augusta, ME: MDOL, 1996. Employment tables by occupation in 1994 with annual job openings and percentage change for each occupation projected through 2005.

**\*Maine Technical College System. *Skills for the 21st Century: A Report for the Maine Technical College System.*** Augusta, ME: MTCS, 1994. Prepared by leaders in Maine business, labor, and education. Lists what Maine high school students should know and know how to do as a minimum for success in the workforce. Patterned after the SCANS report. (See next entry.)

**Pelavin Associates for The Secretary's Commission on Achieving Necessary Skills. *SCANS in the Schools*.** Washington, DC: US

Department of Labor, 1992. A determination of the workplace competencies and the academic and personal foundational skills needed by workers in high performance organizations.

**\*Sher, Barbara. *I Could Do Anything If I Only Knew What It Was*.** New York: Dell Publishing, 1994. Although written for adults, this workbook has tested strategies for getting beyond the inner conflicts and outer obstacles that hamper career choice. Offers specific techniques to try according to interests and circumstances.

**\*US Department of Labor. *Dictionary of Occupational Titles*,** Revised Fourth Edition. Washington, DC: US DOL, 1991. Job information organized by occupations. Lists activities for each job; vocational and academic preparation; and skill level in reasoning, math, and language. The Employment and Training Administration of DOL has now developed an online, automated replacement for the DOT: the Occupational Information Network (O\*NET). (*See website listing in Appendix B.*)

**\*Young Person's Occupational Outlook Handbook: Descriptions for America's Top 250 Jobs.** Indianapolis, IN: JIST Works, 1996. Based on the US DOL *Occupational Outlook Handbook*. Provides one-page job profiles with job description, working conditions, relevant academic subjects, ideas for getting more information, and related jobs. Written to the student and organized according to job type: service, manufacturing, etc.



*Titles marked with an asterisk\* are available from—*

**Curriculum Resource Center of Maine (CRCOM)**

*Coordinator*

200 Hogan Road, Bangor, ME 04401

tel: 207-942-1311 fax: 207-942-1391

***See also, CRCOM's Work Education Resource Center (WERC).***

Free lending library of materials for all age groups. General career-search materials as well as career-search in the context of academic subjects.

Formats include books, reports, workbooks, activities, and videocassettes.



## Appendix B : Annotated List of Internet Sites

*Sites listed here provide information and guidance on a wide variety of career topics as well as a jumping-off place for further research and exploration. Keep in mind that sites change (or disappear) frequently, especially those with long addresses. If you type in a long address (correctly) and get an error message, try deleting backwards to the nearest slash; if necessary, delete all the way to the home page ([www.yyyy.xxx](http://www.yyyy.xxx)) then see what links are available. Websites included are intentionally few, since the wealth of resources on the Internet can be overwhelming.*



[www.ascd.org](http://www.ascd.org) **Association for Supervision and Curriculum Development.** New initiatives; full-text articles from *Educational Leadership*; online store for books and multimedia; free online newsletter; service learning opportunities; and links to other sites, such as Connect for Kids, the Discovery Channel School, *National Geographic*, and PBS Teacher Source.

[www.barnesandnoble.com](http://www.barnesandnoble.com) **Barnes & Noble Bookstore.** Click on Books, then Business, then Career for books such as *The American Almanac of Jobs and Salaries*, and *Knock 'Em Dead*—with resumes, cover letters, and job-interviewing techniques. Search on “teens +career” for books designed for younger students.

[www.cew.wisc.edu/cew/](http://www.cew.wisc.edu/cew/) **Center on Education and Work, University of Wisconsin-Madison.** Click on Catalogs, Newsletters, & Resources for actual examples of community problems addressed through integrated academic and technical assignments across disciplines and student ability levels. See also, TeachNET, a professional development network for contextual teaching, and MathNET ([www.cew.wisc.edu/mathnet/](http://www.cew.wisc.edu/mathnet/)). Links include the National Council of Teachers of Mathematics and the Eisenhower National Clearinghouse for K-12 multimedia resources in math and science, plus online forums for mathematicians and scientists, vocational and technical educators, business and policy leaders, mathematics teachers, and teacher educators.

[www.doleta.gov](http://www.doleta.gov) **US Department of Labor Employment and Training Administration.** Links to employment and training services, including apprenticeships and the Job Corps.

[www.onetcenter.org](http://www.onetcenter.org) **O\*NET/Occupational Information Network.** Relational database to replace the *Dictionary of Occupational Titles*. Comprehensive information on job requirements and worker competencies. Links to career-search and labor market information, job and resume postings, school-to-work, et al. America's Learning Exchange link includes an interactive “Skills Profiler” and “Employability Checkup.”

[www.globalearn.com](http://www.globalearn.com) **GlobaLearn.** Non-profit company with free resources for teachers and interactive learning for students as they follow GlobaLearn's live expeditions all over the world, either on the Internet or through a Listserv (email). Starting place for classroom projects, inter-school collaboration, math and science exercises, geography lessons, and other activities. “Each expedition serves as a model of exploration, inquiry, communication, and creativity.” An *Education World* Top 20 Website.

[www.infoseek.com/Topic?tid=421](http://www.infoseek.com/Topic?tid=421) **Infoseek/Careers Channel.** Clearing house for all kinds of career information. CareerMosaic link includes searches for types of jobs, companies, jobs available by location, et al. Links to resume writing and posting, career planning and training, internships, colleges, graduate programs, and job opportunities abroad.

[www.job-hunt.org](http://www.job-hunt.org) **JobHunt: Outstanding Job Resources.** Aimed at college-graduate job-hunters, but useful for career research. Links to employment opportunities by industry, location, and type, such as entry-level, co-op, seasonal, and resort jobs. Click on USjobs.com for career tips and profiles on companies such as American Express, Artificial Life, Audio Outlet, Neiman Marcus, NetCreations, SchoolSports, and Staples.

[www.mavcc.org](http://www.mavcc.org) **Multistate Academic and Vocational Curriculum Consortium.** Developer and distributor of competency-based instructional materials suitable for students at different levels of instruction. Monthly

teacher discounts and free downloads. Links to educational resources such as the ERIC Clearinghouse, NCRVE (National Center for Research in Vocational Education), and V-TECS (Vocational-Technical Education Consortium of States). Educator's Network provides occupational and specialty areas, names, titles, and email addresses of teachers nationwide.

<http://monster.com> **Monster.com.** Cool career site: job listings, resume postings, customized job searches by industry and location, including overseas; career-search techniques, resource ideas, chat rooms, and more.

[www.nwrel.org](http://www.nwrel.org) **Northwest Regional Educational Laboratory.** Click on Resources, then Library-in-the-Sky; click on Community Resources, click on Employment, then click on Career Exploration for Teens. Click on Assessment & Evaluation Services for “e-traits” and rubrics for reading, writing, oral communication, and math. Many other resources and links for students, parents, teachers, and librarians, such as the Mathematics and Science Education Center, the National Mentoring Center, and the Rural Education Program.

[www.rgu.ac.uk/~sim/research/netlearn/callist.htm](http://www.rgu.ac.uk/~sim/research/netlearn/callist.htm) **NetLearn.** Resources for learning and teaching Internet skills, including email, navigating and posting information on the World Wide Web, and HTML (hypertext markup language). Sponsor is The Robert Gordon University, Aberdeen, Scotland.

[www.washingtonpost.com/parachute/Career\\_Advice/front.htm](http://www.washingtonpost.com/parachute/Career_Advice/front.htm) **The Washington Post.** Aimed at job-seekers in the Washington, DC, area, but useful for career research. Tips and quizzes on resume writing, job interviewing, and salary negotiating, plus message boards, live “Ask the Expert” online discussions with the newspaper’s Career Track columnist, and a mock job interview game.





## Appendix C : Glossary of Career-Related Terms

*These terms are found in the school-to-work/school-to-career vocabulary and are useful for career research and planning. Only definitions relating to that context are given here. Most terms and definitions are taken from Boardman et al., National Worksite Supervisor Certification Level 1 Worksite Supervisor Manual. (See Appendix A: List of Resources.)*



**career cluster** An occupation or field of work incorporating a variety of jobs involving similar basic knowledge, related skills, and progressive responsibility.

**contextual learning** Deriving knowledge from *doing*, as opposed to reading, listening, or thinking only; testing a theory by applying it to a real situation or task.

**culture** The atmosphere or unspoken rules of behavior in an organization or workplace.

**duty/duty area** A major segment or broad category of work within a field or occupational area.

**essential skills or “soft skills”** Desirable personal traits not directly related to a particular job but invaluable to employers, such as positive attitude, willingness to learn, commitment to finishing a task, and cleanliness; also the ability to manage time, be flexible, get along well with co-workers, communicate well, dress appropriately, and take responsibility for one’s actions.

**explicit** Clearly stated, written, shown, demonstrated, etc., to get at underlying assumptions that may seem obvious but may not in fact be shared by all parties.

**high-performance organization/workplace** An environment of sophisticated technology and continuous improvement of systems and processes to meet customer needs. Workers have advanced academic and occupational skills, learn and increase their skills on the job, adapt to rapid market and technological change, and work in teams to solve problems.

**higher-order thinking skills** According to educator B.S. Bloom, thinking skills can be classified under six categories: knowledge, comprehension, application, *analysis*, *synthesis*, and *evaluation*. The first three skills require the learner to recall information and use it by rote, e.g., remember the correct settings on a machine and set up the machine accordingly. The latter three are considered higher-order thinking skills: they require the learner to use originality and creativity to identify or infer relationships, solve new problems or solve old problems in new ways, and judge processes and outcomes to see how they might be improved.

**integrated curriculum** Subject matter and assignments that emphasize the connections between disciplines that are usually taught separately: a history assignment that asks students to investigate the impact of the North American Free Trade Agreement (NAFTA) on a particular company or industry; a machine tool class that investigates the role of algebra and trigonometry in advanced toolmaking.

**internships** Paid and unpaid opportunities to learn on the job, usually short-term (maximum of two years) and part of a career-preparation program.

**job rotation** Learning and performing a series of jobs that reflect various tasks and duties required in a particular career cluster or by an employer. Job rotation helps employers improve processes and helps workers gain new skills, greater flexibility, and see how their jobs fit into the organization or department as a whole.

**job shadowing** A method of career exploration or job training in which the student or trainee follows an experienced worker for a short period of time, in order to observe the tasks and challenges of the job and how that worker handles them.

**learning curve** Describes the process of acquiring new knowledge or skill. The steepness or gentleness of the curve corresponds to the level of difficulty involved.

**learning organization** A work culture that encourages the professional and personal development of employees while nurturing innovation, not only in work tasks but also in relationships among workers, managers, and customers.

**learning styles** Dominant or preferred modes of learning, such as *auditory* (the need to hear it), *visual* (the need to see it), or *tactile-kinesthetic* (the need to touch it or manipulate it). Other learning preferences include *concrete experience* (learning by doing) and *abstract conceptualization* (figuring out how to do a task or problem by thinking about it). Learning preferences may extend to a particular time of day, a desire for silence vs. background noise, and for bright or dim light. People who are *left-brain* dominant tend to work in a logical step-by-step process; those who are *right-brain* dominant tend toward a more creative, less structured approach.

**lifelong learning** The continuing need to acquire new knowledge and skills both for economic success in the workplace and for personal satisfaction as a community member and citizen.

**motivation** The desire to do something in return for some reward. *Extrinsic* motivation means the reward wanted is from someone else, e.g., approval, an increase in pay, a prize, an academic grade. *Intrinsic* motivation means the reward wanted is the pleasure of accomplishment the doer feels within.

**“new employment contract”** Describes the new reality of the workplace: companies can no longer offer “lifetime” employment but can offer employees opportunities to upgrade and diversify their skills in order to take advantage of new job opportunities within or outside the company.

**portfolio** An “expanded resume” that includes not only a traditional resume but actual reports, projects, awards, letters of recommendation, licenses, evaluations, and other documentation of a person’s knowledge, abilities, and work habits. Portfolios are usually required for students in school-to-career programs and are becoming the norm for all job-seekers.

**positive reinforcement** Praise or other reward for good work, attitude, or behavior.

**SCANS** An acronym for The Secretary’s Commission on Achieving Necessary Skills and the work of this commission, appointed in 1991 by Lynn Martin, Secretary of Labor. The commission’s first report, *What Work Requires of Schools*, identified five competencies and three foundation skills that students must acquire in school if they are to be successful as citizens, family members, and workers.

**school-to-work (STW)/school-to-career (STC)** By either name, a strategy to improve both the education and the work readiness of high school students by giving them opportunities to learn in the workplace while they are still in high school, thereby providing a smoother postsecondary transition and an awareness of the need for lifelong learning.

**“soft skills”** See *essential skills*.

**skill certificate** A credential recognized nationally by industry as proof of skills in an occupational cluster; earned by students upon successful completion of a school-to-work program and confirming their mastery of state-determined criteria at least as challenging as those endorsed by the National Skill Standards Board.

**skill standard** The skill set for an occupational cluster established by the industry, state, or other recognized entity and used to guide learning. In addition to industry-specific skills, the standard covers academic competencies and essential skills.

**task/performance task** A unit of work representing necessary and logical steps in the performance of a duty.

**Tech Prep** A sequential, four-year academic and technical program that combines the last two years of high school with two years of postsecondary study leading to the associate’s degree or other certification in a technical field. The Tech Prep structure is often referred to as “2+2,” though this design may vary.

**technical education** Provides skills and competencies needed in technical fields or vocations.

***work-based learning*** Actual work experience that teaches students specific career skills, gives them the opportunity to apply knowledge they've acquired in school, and is designed to raise their aspirations for both academic and career achievement.

***workplace mentor*** Used synonymously with the term “worksite

***worksite supervisor*** The person in the workplace who works directly with the school-to-work student to coach and guide the student's work-based learning; also, “mentor” and “workplace mentor.” The focus of the relationship is on the student: helping the student learn workplace skills and workplace culture.



**Appendixes D & E in the original publication are not available online.**

APPENDIX D\*

*Maine Learning Results Class Activities for Career Preparation K-12*  
Rockland District Schools: January 2000

APPENDIX E\*

*Mid-Coast Career and Vocational Guidance Implementation Plan PreK-12*  
Region 8 Cooperative Board of Education: February 1998

*\*Copies can be obtained from—*

**Curriculum Resource Center of Maine**

200 Hogan Road ♦ Bangor, ME 04401  
tel 942-1311 ♦ fax 942-1391



*Curriculum Integration Project documents are intended for use by Maine public schools. Other individuals or organizations wishing to use them should consult with Tim Hathorne, MAVEA Project Director, Mid-Coast School of Technology, 1 Main Street, Rockland, Maine 04841, or the Research & Curriculum Division of the Center for Career Development, Southern Maine Technical College, 2 Fort Road, South Portland, Maine 04106.*